COMPENSATION FOR FREQUENCY ADJUSTMENT IN MOBILE COMMUNICATION-POSITIONING DEVICE WITH SHARED OSCILLATOR

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ABSTRACT OF THE DISCLOSURE

In a mobile communication device, a method for compensating for a frequency adjustment in an oscillator shared between a communication circuit and a positioning signal receiver is provided. In one embodiment, the method begins to receive and store a positioning signal at a first time point. When, at a second time point, the operating frequency of the shared oscillator is adjusted, the frequency adjustment is recorded. After the positioning signal is completely received and stored, the processing of the positioning signal takes into consideration the frequency adjustment. In that embodiment, the processing hypothesizes a frequency shift in the received positioning signal. According to another aspect of the present invention, a method for determining the operating frequency of an oscillator detects a beginning time point of a reference signal received by the mobile communication device and enables a counter to count in step with a clock signal derived from the oscillator. When an ending time point of the reference signal is received by the mobile communication device, the count is stopped, and the frequency of the oscillator is determined based on the count in the counter and an expected time that elapsed between the beginning time point and the ending time point.